

PIXEL RESAMPLING SYSTEM AND METHOD

ABSTRACT OF THE DISCLOSURE

A resampling system and method for producing a resampled destination image from a source image by solving coefficients for a cubic polynomial transition model between first and second adjacent source pixels from the sample values of the first and second samples and approximations of the first and second sample gradients at the first and second samples, respectively. Approximations of the first and second color gradients are based on a multiple of first and second color slopes, such as twice the value of the color slope. The first color slope is calculated from the sample values of a previous pixel and the first sample and the second sample slope is calculated from the sample values of a subsequent sample and the second sample. The resulting gradient approximations and sample values are used in the cubic transition model to calculate an output sample value for rendering a resampled destination image.